Briefs

Uses of Behavioral Risk Factor Surveillance System Data, 1993–1997

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A B S T R A C T

Objectives. The purpose of this study was to document and describe Behavioral Risk Factor Surveillance System (BRFSS) data use patterns, benefits, and barriers from 1993 to 1997.

Methods. Data use information was gathered via a Medline database search and a telephone survey of BRFSS program directors (n = 54).

Results. The database search uncovered 109 BRFSS-based reports. Program directors indicated that BRFSS data frequently were used to support health policies regarding diabetes, physical activity, and smoking. Frequent data use barriers included insufficient special population data, insufficient city- or county-specific data, and insufficient staff.

Conclusions. Use of BRFSS data, which aid several state health activities, increased from 1993 to 1997. (*Am J Public Health*. 2000;90:774–776)

Although it is acknowledged that public health surveillance systems are underused,[1] few studies have assessed the frequency and extent of their use. In one of the few systematic studies of Behavioral Risk Factor Surveillance System (BRFSS) data users, Remington et al. surveyed 35 state health departments in 1988.[2] Since that study, BRFSS surveillance has changed. The BRFSS survey now includes 50 states and 4 US protectorates, and it incorporates uniform questions that are asked of randomly selected adult residents annually (core) or biennially (rotating core). Also, state-specific, standardized questions are asked of state residents whenever needed (optional modules).[3,4] Finally, state health priorities have changed over the years. By 1995, the BRFSS had grown.[4]

Although, according to the Centers for Disease Control and Prevention (CDC), more than 250 published reports have been based on BRFSS data,[4] interviews of BRFSS directors and database searches could indicate other uses and dissemination of BRFSS data. Therefore, this study was initiated to document BRFSS data use from published reports and from BRFSS program directors with the goal of describing data use patterns, determining perceived benefits of data use in selected areas, and identifying barriers to more widespread use of these data by state health departments from 1993 to 1997.

Methods

We searched Medline[5] databases for reports that used BRFSS data, and we surveyed BRFSS program directors. Our goal was to determine what BRFSS data categories, other than peer-reviewed journal articles, were being disseminated.

Medline databases were searched with Ovid Technologies software (version 3.0) [6] for reports that appeared between 1993 and 1997. Unique keyword searches (alcohol drinking, cigarette smoking, screening, health status, cholesterol, pregnancy, cardiovascular disease, hypertension, influenza, diabetes, and seat belt use) of *Morbidity and Mortality Weekly Report* (*MMWR*) articles and the remaining database produced subsets where the keyword was found only in the document's title or abstract.

All BRFSS program directors (n = 54) were eligible for this survey. (The survey is available from the corresponding author upon request). Program directors were targeted because they were accessible and easy to identify, represented a respondent population of a manageable size, and typically supervised BRFSS data collection, analysis, and dissemination.

Saint Louis University School of Public Health and CDC investigators developed a telephone questionnaire that asked BRFSS directors about BRFSS data use from 1993 to 1997. In pilot testing, 5 individuals familiar with the BRFSS and employed by a state health department responded to the survey. Survey questions were based partly on work by Remington et al.[2] and by Brownson and Simoes.[7] Questionnaires were mailed at least 2 weeks before the respondents were contacted to schedule the telephone interview. A cover letter encouraged respondents to read the questionnaire and to seek additional

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information before the questionnaire was administered by telephone.

The Likert-formatted survey questions[8] addressed developing health policies and regulations, planning intervention and evaluation programs, training and education, and making recommendations to the public. Cross tabulations summarized frequencies, and χ^2 analyses compared participant response categories. SPSS version 7.5.1 (SPSS Inc, Chicago, Ill) was used in conducting analyses.

Results

Database Search

Our Medline database search uncovered 109 reports based on BRFSS data. Forty-one were *MMWR* releases, and 68 were published in peer-reviewed journals, for an average of 8.2 *MMWR* (range: 7–11) and 13.6 peer-reviewed (range: 12–16) reports per year from 1993 to 1997. Keyword searches (derived from BRFSS questionnaire content) among the *MMWR* reports and journal articles indicated that health behavior, tobacco use, preventive health service screening, health status, diabetes, alcohol consumption, exercise, and automobile seat belt use dominated the subject or abstract texts. We found no trend in the number of reports published per year in *MMWR* or in peer-reviewed journals. Seven BRFSS-related *MMWR* reports published from 1993 to 1997 were not detected by the Medline search.[9]

Questionnaire

Of the 54 eligible BRFSS program directors, 47 were interviewed (87%). Forty-five conducted annual surveillance from 1993 to 1997; overall, 87% believed that their state effectively used BRFSS data. At least 85% of the respondents indicated that the data were used in each of the following areas: developing and planning interventions, educating and training others, supporting health department policies, and developing press releases.

BRFSS data were most frequently used to support policies regarding diabetes, physical activity, smoking, state-specific initiatives (via state-added questions), breast cancer, and women's health (excluding pregnancy) (Table 1). Seventy-five percent of the respondents believed that BRFSS data categories were beneficial (data not shown), and most believed that the policy categories summarized in Table 2 were beneficial. The BRFSS data perceived as least beneficial were pregnancy, health insurance, and quality-of life-data. State-added questions were perceived as beneficial survey components, and the most widely perceived data use barriers were lack of city- and county-specific data, special population data, and staff (data not shown).

Comparisons between geographically stratified states (northeastern, southeastern,

TABLE 1—Frequency of Behavioral Risk Factor Surveillance System Data Use to Support Health Policies: 1993–1997

Policy Category	Used Weekly, No. (%)	Used Yearly or Monthly, No. (%)	Never Used, No. (%)	Don't Know, No. (%)
Diabetes	6 (13)	34 (74)	1 (2)	5 (11)
Physical activity	3 (7)	34 (76)	1 (2)	7 (16)
Smoking	3 (4)	35 (76)	3 (7)	6 (13)
State-added questions	2 (4)	34 (76)	5 (11)	5 (11)
Breast cancer control	4 (9)	32 (70)	4 (9)	6 (13)
Women's health	4 (9)	32 (70)	4 (9)	6 (13)
Cervical cancer control	3 (7)	32 (70)	5 (11)	6 (13)
Seat belt use	1 (2)	33 (72)	6 (13)	6 (13)
Alcohol	. . .	33 (72)	7 (15)	6 (13)
Health insurance	1 (2)	32 (70)	8 (17)	5 (11)
Cholesterol	1 (2)	30 (65)	9 (20)	6 (13)
Hypertension	. . .	30 (65)	10 (22)	6 (13)
HIV/AIDS	. . .	30 (65)	9 (20)	7 (15)
Weight control	2 (4)	27 (60)	8 (18)	8 (18)
Flu/pneumonia immunization	. . .	28 (61)	10 (22)	8 (17)
Routine checkup	. . .	24 (52)	13 (28)	9 (20)
Colorectal screening	. . .	24 (52)	15 (33)	7 (15)
Health status	2 (4)	21 (45)	14 (30)	9 (20)
Quality of life	. . .	22 (48)	16 (35)	8 (17)
Clean indoor air (ETS)	1 (2)	21 (46)	20 (43)	4 (9)
Pregnancy	. . .	17 (37)	22 (48)	7 (15)

Note. Percentages are rounded to the nearest 1%. Total percentages may not equal 100. Category totals do not equal 47 because some participants did not respond. ETS = environmental tobacco smoke.

TABLE 2—Perceived Benefits of Behavioral Risk Factor Surveillance System Data Regarding Support of Health Policies, New Program Development, New Laws or Regulations, Special Recognition, or Community Intervention: 1993–1997

Policy Category	Very Beneficial, No. (%)	Slightly Somewhat Beneficial, No. (%)	Not Beneficial, No. (%)
Smoking	39 (83)	3 (6)	5 (11)
Diabetes	33 (70)	9 (19)	5 (11)
Women's health	32 (68)	9 (19)	6 (13)
State-added questions	29 (62)	10 (21)	8 (17)
Physical activity	24 (51)	16 (34)	7 (15)
Optional modules	20 (43)	17 (36)	9 (19)
Weight control	14 (30)	23 (49)	10 (21)
Hypertension	12 (26)	28 (60)	7 (15)
Seat belt use	12 (26)	27 (57)	8 (17)
Alcohol	11 (23)	27 (57)	9 (19)
Flu/pneumonia immunization	10 (21)	28 (60)	9 (19)
Colorectal screening	10 (21)	31 (66)	6 (13)
HIV/AIDS	10 (21)	28 (60)	9 (19)
Routine checkup	10 (21)	26 (55)	11 (23)
Cholesterol	9 (19)	31 (66)	7 (15)
Health status	9 (19)	27 (57)	11 (23
Quality of life	8 (17)	26 (55)	13 (28)
Health insurance	7 (15)	22 (47)	18 (38)
Pregnancy	4 (9)	21 (45)	21 (45)

Note. Percentages are rounded to the nearest 1%. Total percentages may not equal 100. Category totals do not equal 47 because some participants did not respond.

central, southern, southwestern, and western) were made with regard to (1) use of BRFSS data to support health policies, (2) perceived benefit of BRFSS data use, (3) perceived BRFSS data use barriers, and (4) state health department per capita budget. These comparisons revealed no statistically significant differences (χ^2 test, $\alpha = 0.05$).

We observed no significant differences between BRFSS program directors grouped by module use and their ability to use BRFSS data to support policies, plan health interventions, train and educate others, or develop media press releases.

Finally, our results show that data use increased in 3 major areas since the 1988 survey.[2] These increases involved the percentage of respondents who used BRFSS data for policy support (75% in 1987, 95% in 1997), the percentage who used the data for program planning (63% in 1987, 94% in 1997), and the percentage who used the data for press releases (71% in 1987, 92% in 1997).

Discussion

BRFSS data use increasingly aided the development of state health activities from 1993 to 1997. Data use benefits emphasized chronic disease data, data on emerging women's health issues, and the survey's flexibility (state-added modules). The addition of better trained analytic staff, the collection of special population data, and the collection of local area (county, city) data may improve the utility of BRFSS data. Future efforts to evaluate BRFSS data use should include a larger user population and instruments designed to evaluate effective use.[10] □

Contributors

Drs Figgs, Dugbatey, Nelson, Stanwyck, and Brownson conceived and designed the study. Dr Figgs, Dr Brownson, and Ms Bloom gathered the data, performed the analyses, and/or interpreted the final results. All of the authors wrote and approved the paper's final version.

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